Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) Apparatus for drug administration, comprising:

an ingestible capsule, which comprises:

a drug, stored by the capsule;

an environmentally-sensitive mechanism, adapted to change a state thereof responsive to a disposition of the capsule within a gastrointestinal tract of a subject; and

a driving mechanism, which, in response to a change of state of the environmentally-sensitive mechanism, is adapted to drive the drug directly through ~~an endothelial~~ a layer of the gastrointestinal tract.

2. (Original) The apparatus according to claim 1, wherein the drug is stored in the capsule in liquid form.

3. (Original) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism is adapted to undergo the change of state when the capsule is in a small intestine of the subject.

4. (Original) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism is adapted to undergo the change of state when the capsule is in a large intestine of the subject.

5. (Original) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism is adapted to undergo the change of state when the capsule is in a stomach of the subject.

6. (Original) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism is essentially entirely biodegradable.

7. (Original) The apparatus according to claim 1, wherein the driving mechanism is essentially entirely biodegradable.

8. (Original) The apparatus according to claim 1,

wherein the environmentally-sensitive mechanism comprises a sensor adapted to sense an indication of a distance traveled by the capsule in the gastrointestinal tract, and

wherein the environmentally-sensitive mechanism is adapted to undergo the change of state responsive to the distance.

9. (Original) The apparatus according to claim 8, wherein the sensor comprises an inertial sensor.

10. (Original) The apparatus according to claim 1, wherein at least 80% of the mass of the capsule is biodegradable.

11. (Original) The apparatus according to claim 10, wherein at least 95% of the mass of the capsule is biodegradable.

12. (Original) The apparatus according to claim 11, wherein essentially the entire capsule is biodegradable.

13. (Original) The apparatus according to claim 1, wherein the capsule comprises a self-expansible portion, which is adapted to expand responsive to the change of state of the environmentally-sensitive mechanism.

14. (Original) The apparatus according to claim 13, wherein a characteristic diameter of the self-expansible portion is adapted to increase by at least 100%, responsive to the change of state of the environmentally-sensitive mechanism.

15. (Original) The apparatus according to claim 13, wherein the self-expansible portion is adapted to expand responsive to expansion of a gas within the self-expansible portion.

16. (Original) he apparatus according to claim 13, wherein the self-expansible portion is adapted to expand responsive to an inflow of fluid from the gastrointestinal tract.

17. (Original) The apparatus according to claim 13,

wherein a characteristic diameter of the self-expansible portion immediately prior to expanding is smaller than a characteristic diameter of a portion of the gastrointestinal tract containing the capsule, and

wherein a characteristic diameter of the self-expansible portion following expanding is at least as large as a characteristic diameter of the portion of the gastrointestinal tract containing the capsule.

18. (Original) The apparatus according to claim 13,

wherein the capsule comprises an electrode on an outer surface of the self-expansible portion, and

wherein the driving mechanism is adapted to drive current through the electrode when the self-expansible portion is in an expanded state thereof.

19. (Original) The apparatus according to claim 18,

wherein the self-expansible portion includes a first self-expansible portion, at a first end of the capsule,

wherein the capsule includes a second self-expansible portion, at a second end of the capsule, and

wherein the capsule comprises an electrode on an outer surface of the second self-expansible portion.

20. (Original) The apparatus according to claim 19, wherein the capsule comprises a third self-expansible portion, disposed between the first and second self-expansible portions.

21. (Original) The apparatus according to claim 20, wherein the capsule comprises an electrode on an outer surface of the third self-expansible portion.

22. (Original) The apparatus according to claim 20, wherein the capsule contains no electrodes on an outer surface of the third self-expansible portion.

23. (Original) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism comprises a coating on a surface of the capsule.

24. (Original) The apparatus according to claim 23, wherein the coating comprises a pH-sensitive coating.

25. (Original) The apparatus according to claim 24, wherein the pH-sensitive coating is sensitive to a pH that is characteristic of a small intestine.

26. (Original) The apparatus according to claim 23,

wherein the coating is adapted to cover a portion of the driving mechanism, prior to the change of state, in a manner that substantially prevents contact of the driving mechanism with a first fluid of the gastrointestinal tract, and

wherein the coating is adapted to uncover the portion of the driving mechanism in response to the coating contacting a second fluid of the gastrointestinal tract.

27. (Currently Amended) The apparatus according to claim 26, wherein the driving mechanism is adapted to drive the drug directly through the ~~endothelial~~ layer of the gastrointestinal tract responsive to uncovering of the portion of the driving mechanism.

28. (Original) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism comprises a timer, adapted to change the state of the environmentally-sensitive mechanism responsive to a duration of the capsule in the gastrointestinal tract.

29. (Original) The apparatus according to claim 28, wherein the timer comprises an electronic timer.

30. (Original) The apparatus according to claim 28, wherein the timer comprises a chemical timer, adapted to change the state of the environmentally-sensitive mechanism responsive to a chemical reaction.

31. (Currently Amended) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism comprises a camera, adapted to image the gastrointestinal tract, and wherein the driving mechanism is adapted to drive the drug through the ~~endothelial~~ layer in response to an image acquired by the camera.

32. (Original) The apparatus according to claim 31, wherein the capsule comprises a control component, adapted to interpret the acquired image and activate the driving mechanism responsive thereto.

33. (Original) The apparatus according to claim 31, wherein the capsule comprises a transmit/receive unit, adapted to transmit data responsive to the acquired image, to receive an instruction responsive to the transmission, and to activate the driving mechanism responsive to the instruction.

34. (Currently Amended) The apparatus according to claim 1, wherein the environmentally-sensitive mechanism comprises a sensor, adapted to sense a characteristic of the gastrointestinal tract, and wherein the driving mechanism is adapted to drive the drug through the ~~endothelial~~ layer in response to the sensed characteristic.

35. (Original) The apparatus according to claim 34, wherein the capsule comprises a control component, adapted to interpret the sensed characteristic and activate the driving mechanism responsive thereto.

36. (Original) The apparatus according to claim 34, wherein the capsule comprises a transmit/receive unit, adapted to transmit data responsive to the sensed characteristic, to receive an instruction responsive to the transmission, and to activate the driving mechanism responsive to the instruction.

37. (Original) The apparatus according to claim 34, wherein the sensor comprises an enzymatic sensor.

38. (Original) The apparatus according to claim 34, wherein the sensor comprises an optical sensor.

39. (Original) The apparatus according to claim 34, wherein the sensor comprises a thermal sensor.

40. (Original) The apparatus according to claim 34, wherein the sensor comprises a pH sensor.

41. (Original) The apparatus according to claim 40, wherein the pH sensor is adapted to detect a pH between about 4.7 and about 6.5.

42. (Original) The apparatus according to claim 40, wherein the pH sensor is adapted to detect a pH between about 1.2 and about 3.5.

43. (Original) The apparatus according to claim 40, wherein the pH sensor is adapted to detect a pH between about 4.6 and about 6.0.

44. (Original) The apparatus according to claim 40, wherein the pH sensor is adapted to detect a pH between about 7.5 and about 8.0.

45. (Original) The apparatus according to claim 34, wherein the sensor comprises a sensor adapted to detect a pathological condition of the gastrointestinal tract.

46. (Original) The apparatus according to claim 45, wherein the sensor comprises a sensor adapted to detect bleeding in the gastrointestinal tract.

47. (Original) The apparatus according to claim 45, wherein the sensor comprises a sensor adapted to detect inflammation in the gastrointestinal tract.

48. (Currently Amended) The apparatus according to claim 1,

wherein the capsule comprises a needle comprising a sharp tip thereof, and

wherein the tip of the needle is adapted to contact the ~~endothelial~~ layer of the gastrointestinal tract in response to the change of state of the environmentally-sensitive mechanism.

49. (Original) The apparatus according to claim 48, wherein the needle is hollow.

50. (Original) The apparatus according to claim 48, wherein the needle is not hollow.

51. (Currently Amended) The apparatus according to claim 48,

wherein the capsule comprises an elastic element, adapted to maintain the sharp tip of the needle at an original position that is substantially within the capsule, prior to the change of state,

wherein, in response to an action of the driving mechanism, the elastic element is adapted to change shape in a manner that permits the sharp tip of the needle to contact the ~~endothelial~~ layer of the gastrointestinal tract, and

wherein, at a time after initiation of the driving of the drug through the ~~endothelial~~ layer, the elastic element is adapted to cause the sharp tip of the needle to withdraw to the original position.

52. (Currently Amended) The apparatus according to claim 48, wherein the driving mechanism is adapted to drive the needle to puncture the ~~endothelial~~ layer of the gastrointestinal tract at a puncture site, in response to the change of state of the environmentally-sensitive mechanism.

53. (Original) The apparatus according to claim 52, wherein the driving mechanism is adapted to drive the drug through the puncture site.

54. (Original) The apparatus according to claim 1, wherein the drug is stored in the capsule in powder form.

55. (Original) The apparatus according to claim 54, wherein the capsule is adapted to mix the drug in powder form with a fluid, in response to the change of state of the environmentally-sensitive mechanism.

56. (Original) The apparatus according to claim 55,

wherein the fluid includes fluid of the gastrointestinal tract, and

wherein the capsule is adapted to mix the drug in powder form with the gastrointestinal tract fluid, in response to the change of state of the environmentally-sensitive mechanism.

57. (Original) The apparatus according to claim 55,

wherein the fluid comprises fluid stored within the capsule, separately from the drug in powder form, and

wherein the capsule is adapted to mix the drug in powder form with the fluid stored within the capsule, in response to the change of state of the environmentally-sensitive mechanism.

58. (Original) The apparatus according to claim 1,

wherein the driving mechanism comprises a control component, a first electrode, a second electrode, and a third electrode,

wherein the control component is adapted to drive an iontophoretic current between the first and second electrodes, and

wherein the control component is adapted to drive an electropulsation current through the third electrode.

59. (Original) The apparatus according to claim 1,

wherein the driving mechanism comprises a control component, a first electrode, and a second electrode, and

wherein the control component is adapted to drive a current between the first and second electrodes in response to the change of state of the environmentally-sensitive mechanism.

60. (Original) The apparatus according to claim 59, wherein the environmentally-sensitive mechanism comprises a coating on a surface of the capsule.

61. (Original) The apparatus according to claim 59, wherein the driving mechanism comprises the first and second electrodes and no other electrodes.

62. (Original) The apparatus according to claim 59, wherein the driving mechanism comprises more than three electrodes.

63. (Currently Amended) The apparatus according to claim 59, wherein the control component is adapted to configure the current to ablate at least a portion of the ~~endothelial~~ layer of the gastrointestinal tract.

64. (Original) The apparatus according to claim 59, wherein the control component comprises a battery.

65. (Original) The apparatus according to claim 64, wherein the battery is biodegradable.

66. (Original) The apparatus according to claim 64, wherein the battery comprises zinc and manganese dioxide.

67. (Original) The apparatus according to claim 59, wherein the driving mechanism comprises a third electrode, and wherein the control component is adapted to drive a

current between the first and third electrodes in response to the change of state of the environmentally-sensitive mechanism.

68. (Original) The apparatus according to claim 67, wherein the first electrode is physically disposed on the capsule between the second electrode and the third electrode.

69. (Original) The apparatus according to claim 67, wherein the control component is adapted to configure the current driven between the first and second electrodes to be substantially identical to the current driven between the first and third electrodes.

70. (Original) The apparatus according to claim 67,

wherein the control component is adapted to configure the current driven between the first and second electrodes to consist essentially of an iontophoretic current, and

wherein the control component is adapted to configure the current driven between the first and third electrodes to consist essentially of an electropulsation current.

71. (Currently Amended) The apparatus according to claim 59, wherein the control component is adapted to drive the current between the first and second electrodes at a level sufficient to iontophoretically drive the drug through the ~~endothelial~~ layer of the gastrointestinal tract.

72. (Original) The apparatus according to claim 71, wherein the control component is adapted to configure a voltage drop between the first and second electrodes to be less than about 3 volts.

73. (Original) The apparatus according to claim 71, wherein the control component is adapted to configure the current to be substantially DC.

74. (Original) The apparatus according to claim 71, wherein the control component is adapted to configure the current to have a characteristic frequency less than about 50 Hz.

75. (Original) The apparatus according to claim 74, wherein the control component is adapted to configure the current to have a characteristic frequency less than about 5 Hz.

76. (Original) The apparatus according to claim 71, wherein the control component is adapted to configure the current to have an amplitude less than about 5 mA.

77. (Original) The apparatus according to claim 76, wherein the control component is adapted to configure the current to have an amplitude greater than about 0.5 mA.

78. (Currently Amended) The apparatus according to claim 59, wherein the control component is adapted to configure the current to increase conduction of the drug through

tight junctions of the ~~endothelial~~ layer of the gastrointestinal tract by means of electropulsation.

79. (Original) The apparatus according to claim 78, wherein the control component is adapted to configure a voltage drop between the first and second electrodes to be between about 3 and about 12 volts.

80. (Original) The apparatus according to claim 78, wherein the control component is adapted to configure a voltage drop between the first and second electrodes to be between about 12 and about 50 volts.

81. (Original) The apparatus according to claim 78, wherein the control component is adapted to configure the current to have a characteristic frequency less than about 300 Hz.

82. (Original) The apparatus according to claim 81, wherein the control component is adapted to configure the current to have a characteristic frequency less than about 100 Hz.

83. (Original) The apparatus according to claim 82, wherein the control component is adapted to configure the current to have a characteristic frequency greater than about 1 Hz.

84. (Original) The apparatus according to claim 83, wherein the control component is adapted to configure the current to have a characteristic frequency greater than about 10 Hz.

85. (Original) The apparatus according to claim 82, wherein the control component is adapted to configure the current to have a characteristic frequency less than about 20 Hz.

86. (Original) The apparatus according to claim 85, wherein the control component is adapted to configure the current to have a characteristic frequency greater than about 10 Hz.

87. (Currently Amended) The apparatus according to claim 59, wherein the control component is adapted to configure the current to: (a) be at a level sufficient to iontophoretically drive the drug through the ~~endothelial~~ layer of the gastrointestinal tract, and (b) increase conduction of the drug through tight junctions of the ~~endothelial~~ layer of the gastrointestinal tract by means of electropulsation.

88. (Original) The apparatus according to claim 87,

wherein the current includes an iontophoretic current and an electropulsation current,

wherein the control component is adapted to drive the iontophoretic current between the first and second electrodes, and

wherein the control component is adapted to drive the electropulsation current between the first and second electrodes.

89. (Original) The apparatus according to claim 87, wherein the control component is adapted to configure the current to have a high-frequency component and a low-frequency component.

90. (Original) The apparatus according to claim 89, wherein the control component is adapted to configure the high-frequency component and the low-frequency component to have frequencies that are respectively greater than and less than 5 Hz.

91. (Original) The apparatus according to claim 89, wherein the control component is adapted to drive the high-frequency component and the low-frequency component at the same time.

92. (Original) The apparatus according to claim 89, wherein the control component is adapted to drive the high-frequency component prior to driving the low-frequency component.

93. (Original) The apparatus according to claim 92, wherein the control component is adapted to initiate driving the high-frequency component at least 30 seconds prior to driving the low-frequency component.

94. (Original) The apparatus according to claim 1, wherein the driving mechanism comprises a piston and a piston driver, and wherein the piston driver is adapted to drive the piston to drive the drug from the capsule.

95. (Original) The apparatus according to claim 94, wherein the piston driver comprises a compressed gas that is adapted to expand in response to the change of state of the environmentally-sensitive mechanism.

96. (Original) The apparatus according to claim 94, wherein the piston driver comprises a spring-like mechanical element.

97. (Currently Amended) The apparatus according to claim 1, wherein the driving mechanism comprises a gas generator, which, in response to the change of state of the environmentally-sensitive mechanism, is adapted to generate a gas which on expansion thereof performs work on the drug in a manner that drives the drug from the capsule and directly through the ~~endothelial~~ layer of the gastrointestinal tract.

98. (Original) The apparatus according to claim 97, wherein the gas generator is adapted to generate, within about 1 minute, a pressure change of at least 0.2 atmosphere

within the capsule, in response to the change of state of the environmentally-sensitive mechanism.

99. (Original) The apparatus according to claim 97, wherein the gas generator is adapted to generate, within about 20 minutes, a pressure change of at least 0.2 atmosphere within the capsule, in response to the change of state of the environmentally-sensitive mechanism.

100. (Currently Amended) The apparatus according to claim 97,

wherein the capsule comprises a flexible membrane between the gas generator and the drug,

wherein the membrane is adapted to be deflected in response to the generation of the gas, and

wherein the membrane, in response to being deflected, is adapted to drive the drug through the ~~endothelial~~ layer of the gastrointestinal tract.

101. (Currently Amended) The apparatus according to claim 97, wherein the gas generator is in a common compartment with the drug, and wherein the gas generated by the gas generator, in direct contact with the drug, drives the drug from the capsule and directly through the ~~endothelial~~ layer of the gastrointestinal tract.

102. (Original) The apparatus according to claim 97, wherein the gas generator is adapted to generate a pressure change of at least about 0.1 atmosphere within the capsule, in response to the change of state of the environmentally-sensitive mechanism.

103. (Original) The apparatus according to claim 102, wherein the gas generator is adapted to configure the pressure change to be less than about 5 atmospheres, in response to the change of state of the environmentally-sensitive mechanism.

104. (Original) The apparatus according to claim 103, wherein the gas generator is adapted to configure the pressure change to be between about 0.5 and 3 atmospheres, in response to the change of state of the environmentally-sensitive mechanism.

105. (Original) The apparatus according to claim 103, wherein the gas generator is adapted to configure the pressure change to occur during less than about 1 minute.

106. (Original) The apparatus according to claim 103, wherein the gas generator is adapted to configure the pressure change to occur over a time period having a duration between about 1 and 10 minutes.

107. (Original) The apparatus according to claim 103, wherein the gas generator is adapted to configure the pressure change to occur over a time period having a duration between about 10 and 120 minutes.

108. (Original) The apparatus according to claim 97, wherein the gas generator is adapted to facilitate entry into the capsule of fluid of the gastrointestinal tract in response to the change of state of the environmentally-sensitive mechanism, and to generate the gas responsive to the entry of the gastrointestinal tract fluid into the capsule.

109. (Original) The apparatus according to claim 108,

wherein the gas generator comprises a substance, and

wherein the gas generator is adapted to generate the gas by causing contact of the gastrointestinal tract fluid with the substance, in response to the change of state of the environmentally-sensitive mechanism.

110. (Original) The apparatus according to claim 109, wherein the substance comprises a substance selected from the list consisting of elemental sodium and elemental calcium.

111. (Original) The apparatus according to claim 97,

wherein the gas generator comprises a substance having a pH greater than 7, and

wherein the gas generator is adapted to generate the gas by facilitating contact between the substance and fluid of the gastrointestinal tract, in response to the change of state of the environmentally-sensitive mechanism.

112. (Original) The apparatus according to claim 111, wherein the substance comprises sodium bicarbonate.

113. (Original) The apparatus according to claim 111, wherein the gas generator comprises a membrane proximate the substance, which is adapted to facilitate entry of the gastrointestinal tract fluid into the capsule, through the membrane, in response to the change of state of the environmentally-sensitive mechanism.

114. (Original) The apparatus according to claim 113, wherein the membrane comprises a hydrophilic membrane.

115. (Original) The apparatus according to claim 113, wherein the membrane is integral to an outer surface of the capsule.

116. (Original) The apparatus according to claim 97, wherein the gas generator comprises a galvanic cell.

117. (Original) The apparatus according to claim 116, wherein the galvanic cell comprises a first electrode comprising zinc and a second electrode comprising manganese dioxide.

118. (Original) The apparatus according to claim 116, wherein the galvanic cell comprises first and second galvanic cell electrodes, which are adapted to pass current through fluid of the gastrointestinal tract at a level sufficient to electrolyze the fluid and generate the gas.

119. (Original) The apparatus according to claim 116, wherein the gas generator comprises a membrane, which is adapted to facilitate entry of fluid of the gastrointestinal tract into the capsule, through the membrane, and into contact with the first and second galvanic cell electrodes, in response to the change of state of the environmentally-sensitive mechanism.

120. (Original) The apparatus according to claim 97,

wherein an outer surface of the capsule is shaped so as to define an orifice having an edge, the edge of the orifice generally being in contact with a portion of the gastrointestinal tract at a time after the environmentally-sensitive mechanism changes state, and

wherein the gas generator and the drug are disposed within the capsule in such a manner that the generation of the gas drives the drug through the orifice and, therefrom, through the portion of the gastrointestinal tract.

121. (Original) The apparatus according to claim 120, wherein the capsule comprises a seal, which blocks the orifice prior to the change of state of the environmentally-sensitive mechanism, and which is adapted to be removed from the orifice in response to the generation of the gas by the gas generator.

122. (Original) The apparatus according to claim 121, wherein the seal comprises a plug, adapted to:

be disposed within the orifice prior to the change of state of the environmentally-sensitive mechanism,

resist ejection from the orifice during an initial rise in pressure within the capsule that occurs in response to the generation of the gas by the gas generator, and

be ejected from the orifice when the pressure within the capsule surpasses a threshold pressure.

123. (Original) The apparatus according to claim 120, wherein the capsule is shaped such that a characteristic diameter of the orifice is between about 20 and about 400 microns.

124. (Original) The apparatus according to claim 123, wherein the capsule is shaped such that the characteristic diameter of the orifice is between about 20 and about 50 microns.

125. (Original) The apparatus according to claim 123, wherein the capsule is shaped such that the characteristic diameter of the orifice is between about 50 and about 300 microns.

126. (Original) The apparatus according to claim 97, wherein the gas generator comprises an electrical power source, adapted to drive current through a fluid in a manner that causes the generation of the gas by electrolysis of the fluid.

127. (Original) The apparatus according to claim 126,

wherein the power source comprises first and second poles,

wherein the gas generator comprises the fluid,

wherein the first pole of the power source is directly electrically coupled to the fluid,

wherein the gas generator comprises a coupling electrode, electrically coupled to the second pole of the power source,

wherein the gas generator comprises a second electrode, electrically coupled via the fluid to the first pole of the power source, and substantially electrically isolated from the coupling electrode prior to the change of state of the environmentally-sensitive mechanism, and

wherein the environmentally-sensitive mechanism is adapted, in response to the change of state, to establish electrical contact between the coupling electrode and the second electrode.

128. (Original) The apparatus according to claim 126, wherein the fluid includes fluid of the gastrointestinal tract, and wherein the gas generator is adapted, in response to the change of state of the environmentally-sensitive mechanism, to drive the current through the fluid of the gastrointestinal tract.

129. (Currently Amended) Apparatus for administration of a drug, comprising:

an ingestible capsule adapted to store the drug, the capsule comprising:

an environmentally-sensitive mechanism, adapted to change a state thereof responsive to a disposition of the capsule within a gastrointestinal tract of a subject; and

a driving mechanism, which, in response to a change of state of the environmentally-sensitive mechanism, is adapted to drive the drug directly through an ~~endothelial~~ layer of the gastrointestinal tract.

130. (Currently Amended) Apparatus for administration of a drug, comprising:

an ingestible environmentally-sensitive mechanism, adapted to change a state thereof responsive to a disposition thereof within a gastrointestinal tract of a subject; and

a driving mechanism, which, in response to a change of state of the environmentally-sensitive mechanism, is adapted to drive the drug directly through ~~an endothelial~~ a layer of the gastrointestinal tract.

131. (Withdrawn) Apparatus, comprising:

a capsule adapted to travel through a gastrointestinal tract of a subject, the capsule comprising:

first and second electrodes; and

a control component, adapted to drive, at each of a plurality of sites longitudinally distributed along the gastrointestinal tract, an iontophoretic current that travels from the first electrode, through an endothelial layer of the gastrointestinal tract, and to the second electrode.

132. (Withdrawn) The apparatus according to claim 131, wherein the control component is adapted to drive the iontophoretic current while the capsule is in motion.

133. (Withdrawn) The apparatus according to claim 131, wherein the control component is adapted to configure a voltage drop between the first and second electrodes to be less than about 3 volts, and to configure a characteristic frequency of the iontophoretic current to be less than about 5 Hz.

134. (Withdrawn) The apparatus according to claim 131, wherein the capsule comprises a self-expansible portion, and wherein the first electrode is disposed on an outer surface of the self-expansible portion.

135. (Withdrawn) The apparatus according to claim 134, wherein the capsule comprises a second self-expansible portion, and wherein the second electrode is disposed on an outer surface of the second self-expansible portion.

136. (Withdrawn) The apparatus according to claim 134, wherein the capsule comprises a coating on an outer surface thereof, and wherein the control component is adapted to initiate driving the iontophoretic current in response to a change of state of the coating.

137. (Withdrawn) Apparatus, comprising:

a capsule adapted to travel through a gastrointestinal tract of a subject, the capsule comprising:

first and second electrodes; and

a control component, adapted to drive, at each of a plurality of sites longitudinally distributed along the gastrointestinal tract, an electropulsation current that travels from the first electrode, through an endothelial layer of the gastrointestinal tract, and to the second electrode.

138. (Withdrawn) The apparatus according to claim 137, wherein the control component is adapted to drive the electropulsation current while the capsule is in motion.

139. (Withdrawn) The apparatus according to claim 137, wherein the control component is adapted to configure a voltage drop between the first and second electrodes to be greater than about 3 volts, and to configure a characteristic frequency of the electropulsation current to be between about 1 and 30 Hz.

140. (Withdrawn) The apparatus according to claim 137, wherein the capsule comprises a self-expansible portion, and wherein the first electrode is disposed on an outer surface of the self-expansible portion.

141. (Withdrawn) The apparatus according to claim 140, wherein the capsule comprises a second self-expansible portion, and wherein the second electrode is disposed on an outer surface of the second self-expansible portion.

142. (Withdrawn) The apparatus according to claim 140, wherein the capsule comprises a coating on an outer surface thereof, and wherein the control component is adapted to initiate driving the electropulsation current in response to a change of state of the coating.

143. (Withdrawn) Apparatus, comprising:

a capsule adapted to travel through a gastrointestinal tract of a subject, the capsule comprising:

first and second electrodes;

a coating on an outer surface of the capsule; and

a control component, adapted to drive an iontophoretic current that travels from the first electrode, through an endothelial layer of the gastrointestinal tract, and to the second electrode, in response to a change of state of the coating.

144. (Withdrawn) The apparatus according to claim 143, wherein the capsule comprises first and second self-expansible portions, at respective ends of the capsule, and wherein the first and second electrodes are disposed on respective outer surfaces of the first and second self-expansible portions.

145. (Withdrawn) A method for administration of a drug, comprising:

administering to a subject an ingestible capsule that includes a drug;

detecting a disposition of the capsule within a gastrointestinal tract of the subject; and

in response to detecting the disposition, driving the drug directly through an endothelial layer of the gastrointestinal tract.

146. (Withdrawn) The method according to claim 145, wherein driving the drug comprises iontophoretically driving the drug.

147. (Withdrawn) The method according to claim 145, wherein driving the drug comprises applying an electropulsation current configured to facilitate the driving of the drug.

148. (Withdrawn) The method according to claim 145, wherein driving the drug comprises expanding a portion of the capsule in response to detecting the disposition.

149. (Withdrawn) The method according to claim 145, wherein detecting the disposition comprises causing an interaction between a coating on an outer surface of the capsule and fluid of the gastrointestinal tract.

150. (Withdrawn) An electrically assisted, drug-delivery system, comprising:

a biologically inert and biologically compatible device, comprising:

a power supply;

a control component, in power communication with said power supply; and

at least one apparatus for electrically assisted drug transport, said apparatus being in signal communication with said control component and in power communication with said power supply; and

a drug attached to said device.

151. (Withdrawn) The system of claim 150, wherein said drug further includes pharmaceutically acceptable additives for absorption enhancement.

152. (withdrawn) The system of claim 150, wherein said drug further includes pharmaceutically acceptable additives for improved bioavailability.

153. (Withdrawn) The system of claim 150, wherein said drug further includes pharmaceutically acceptable additives for controlled release.

154. (Withdrawn) The system of claim 150, wherein said drug further includes pharmaceutically acceptable additives for ph-dependent controlled release.

155. (Withdrawn) The system of claim 150, wherein said drug further includes pharmaceutically acceptable additives for time-dependent controlled release.

156. (Withdrawn) The system of claim 150, wherein said apparatus for electrically assisted drug transport, comprises an apparatus for at least two electrotransport processes.

157. (Withdrawn) The system of claim 150, wherein said at least one apparatus for electrically assisted drug transport comprises an apparatus for sonophoresis.

158. (Withdrawn) The system of claim 150, wherein said at least one apparatus for electrically assisted drug transport comprises an apparatus for at least one ablation process.

159. (Withdrawn) The system of claim 150, wherein said at least one apparatus for electrically assisted drug transport comprises an apparatus for at least two processes, selected from the group consisting of electrotransport, sonophoresis, and ablation.

160. (Withdrawn) The system of claim 150, wherein said device includes at least one self-expansible portion, for making good contact with the gastrointestinal walls.

161. (Withdrawn) The system of claim 150, wherein said power supply is a galvanic cell, which uses gastrointestinal fluids as an electrolyte.

162. (Withdrawn) The system of claim 150, wherein said device includes a pH sensor.

163. (Withdrawn) The system of claim 150, wherein said device includes a telemetry system for communicating with an extracorporeal station.

164. (Withdrawn) The system of claim 150, wherein said device is ingestible.

165. (Withdrawn) The system of claim 150, wherein said device is attached to a catheter.

166. (Withdrawn) The system of claim 150, wherein said device further includes an imaging apparatus.

167. (Withdrawn) The system of claim 150, wherein said at least one apparatus for electrically assisted drug transport comprises an apparatus for at least one electrotransport process.

168. (Withdrawn) The system of claim 167, wherein said apparatus for electrotransport is further operative to enhance peristalsis, by electrostimulation.

169. (Withdrawn) The system of claim 150, wherein said device further defines a drug-dispensing cavity.

170. (Withdrawn) The system of claim 169, wherein said drug-dispensing cavity is adapted for controlled release.

171. (Withdrawn) The system of claim 169, wherein said drug-dispensing cavity is adapted for pH dependent controlled release.

172. (Withdrawn) The system of claim 169, wherein said drug-dispensing cavity is self-expansible, to make better contact with the gastrointestinal walls.

173. (Withdrawn) A method of oral drug delivery, comprising:

orally inserting a drug into the gastrointestinal tract; and

inducing transport through the gastrointestinal walls, by a method selected from the group consisting of: at least one electrotransport process, sonophoresis, and at least one ablation process.